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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/690,679	10/16/2000	Eric Engstrom	51003.P026	3411

25943 7590 06/04/2002

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EXAMINER

SOBUTKA, PHILIP

ART UNIT PAPER NUMBER

2683

DATE MAILED: 06/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/690,679

Applicant(s)

ENGSTROM, ERIC

Examiner

Philip J. Sobutka

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2002.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:



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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT	PAPER
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6

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. Claims 17,18 are is rejected under 35 U.S.C. 103(a) as being unpatentable over Villa-Real (US 4,320,767) in view of Myllymaki (US 5,670,944).

Consider claim 17. Villa-Real teaches a mobile client device comprising : a palm sized body (Villa-Real), and a means to generate a heart rate of a user. Villa-Real teaches heart rate circuitry which requires the user to press the device against the arm to be used (Villa-Real see especially fig 11). Villa-Real lacks a teaching of the device having a plurality of sensors on the outside of the device. Myllymaki teaches a mobile client device comprising: a plurality of sensors to sense and output blood flow (heart rate) data of a user holding the device (Myllymaki title, col 1, line 5) with the sensors being disposed on a plurality of locations on the device (Myllymaki see fig 1B); and a means coupled to the sensors for inferring a holding pattern (that is, determining which sensors have valid output), and generating a heart rate of the user using a subset of the data output by the sensors, based on the holding pattern, that is compensating for false data from some of the sensors (Myllymaki see especially fig 1, item 9, col 3, lines 3-30). It would have been obvious to one of ordinary skill in the art to modify the heart monitor of Villa-Real to use the monitoring circuitry of Villa-real in order to simplify use by allowing the user to monitor heart rate by simply holding the device.

As to claim18, Villa-Real in view of Myllymaki lacks a teaching of the sensors comprising first and second sets of sensors disposed along first and second edges. It would be appreciated by those skilled in the art at the time the invention was made, that

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the above difference would depend more upon engineering design considerations than any inventive concept because the overall operation would not be changed by the specific arrangement of the sensors as long as they would be in contact with the user. Therefore, it would have been obvious to one of ordinary skill in the art to modify Villa-Real in view of Myllymaki to have the sensors comprise first and second sets along first and second edges of the device in order to allow the user to determine heart rate by simply holding the device.

2. Claims 19,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Villa-Real in view of Myllymaki and in view of Righter et al (US 4,938,228).

As to claim 18, Villa-Real in view of Myllymaki lacks a teaching of the comparing the received data from the sensors against a reference of sensed data profiles. Righter teaches a heart rate monitor which compares received sensor data against saved sensed data (Righter see especially col 2, lines 32-60). It would have been obvious to one of ordinary skill in the art to modify Villa-Real in view of Myllymaki as taught by Righter in order to improve the accuracy of the determined heart rate.

As to claim 19, Villa Real in view of Myllymaki lacks a teaching of selecting a set of weights to be applied to normalize sensing data received from the sensors. Righter teaches a heart rate monitor which uses selected weights to normalize data from the sensors (Righter see especially col 6, line 63 – col 7, line 10, col 12, line 49 – col 13, line 5). It would have been obvious to one of ordinary skill in the art to modify Myllymaki as taught by Righter in order to improve the accuracy of the determined heart rate.

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3. Claim 1-3,7,8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Villa-Real in view of Myllymaki and in view of Gaukel (US 6,100,806).

Consider claims 1,2,3,7,8. Villa-Real in view of Myllymaki teaches everything claimed as shown above except for the device being a mobile phone. Gaukel teaches a mobile phone incorporating a heart rate sensor (Gaukel fig 1, col 12, lines 12-33). It would have been obvious to one of ordinary skill in the art to further modify the arrangement of Villa-Real in view of Myllymaki to incorporate a phone as taught by Gaukel in order to allow the user of the device to make calls.

4. Claims 4,5, are rejected under 35 U.S.C. 103(a) as being unpatentable over Villa-Real in view of Myllymaki and in view of Gaukel and in view of Righter et al (US 4,938,228).

As to claim 4, Villa-Real in view of Myllymaki and in view of Gaukel lacks a teaching of the comparing the received data from the sensors against a reference of sensed data profiles. Righter teaches a heart rate monitor which compares received sensor data against saved sensed data (Righter see especially col 2, lines 32-60). It would have been obvious to one of ordinary skill in the art to modify Villa-Real in view of Myllymaki and in view of Gaukel as taught by Righter in order to improve the accuracy of the determined heart rate.

As to claim 5, Villa-Real in view of Myllymaki and in view of Gaukel lacks a teaching of selecting a set of weights to be applied to normalize sensing data received from the sensors. Righter teaches a heart rate monitor which uses selected weights to normalize data from the sensors (Righter see especially col 6, line 63 – col 7, line 10,

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col 12, line 49 – col 13, line 5). It would have been obvious to one of ordinary skill in the art to modify Villa-Real in view of Myllymaki and in view of Gaukel as taught by Righter in order to improve the accuracy of the determined heart rate.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Villa-Real in view of Myllymaki and in view of Gaukel and in view of Matthews (US 4,867,442)

Villa-Real in view of Myllymaki and in view of Gaukel lacks a teaching of a calibration mode wherein a user confirms a generated heart rate. Matthews teaches a heart rate monitor with a calibration mode wherein a user confirms a generated heart rate (Matthews see especially col 3, lines 5-10). It would have been obvious to one of ordinary skill in the art to modify Villa-Real in view of Myllymaki and in view of Gaukel to add the calibration mode of Matthews in order to improve the accuracy of the determined heart rate.

6. Claims 9-11, 15, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Villa-Real in view of Myllymaki and in view of Lichter et al (US 5,827,179).

Consider claims 9, 10, 11, 15, 16. Villa-Real in view of Myllymaki teaches everything claimed as shown above except for the mobile device being a PDA. Lichter teaches a PDA including a heart rate monitor (Lichter fig 2, col 6, lines 50-62, col 8, lines 12-14). It would have been obvious to one of ordinary skill in the art to modify Villa-Real in view of Myllymaki to incorporate a PDA as taught by Lichter in order to allow the user to increase the value of the device to the user.

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7. Claims 12,13, are rejected under 35 U.S.C. 103(a) as being unpatentable over Villa-Real in view of Myllymaki and in view of Lichter and further in view of Righter et al (US 4,938,228).

As to claim 12, Villa-Real in view of Myllymaki and in view of Lichter lacks a teaching of the comparing the received data from the sensors against a reference of sensed data profiles. Righter teaches a heart rate monitor which compares received sensor data against saved sensed data (Righter see especially col 2, lines 32-60). It would have been obvious to one of ordinary skill in the art to modify Villa-Real in view of Myllymaki and in view of Lichter as taught by Righter in order to improve the accuracy of the determined heart rate.

As to claim 13, Villa-Real in view of Myllymaki and in view of Lichter lacks a teaching of selecting a set of weights to be applied to normalize sensing data received from the sensors. Righter teaches a heart rate monitor which uses selected weights to normalize data from the sensors (Righter see especially col 6, line 63 – col 7, line 10, col 12, line 49 – col 13, line 5). It would have been obvious to one of ordinary skill in the art to modify Villa-Real in view of Myllymaki and in view of Lichter as taught by Righter in order to improve the accuracy of the determined heart rate.

8. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Villa-Real in view of Myllymaki and in view of Lichter and in view of Matthews (US 4,867,442)

Villa-Real in view of Myllymaki and in view of Lichter lacks a teaching of a calibration mode wherein a user confirms a generated heart rate. Matthews teaches a heart rate monitor with a calibration mode wherein a user confirms a generated heart

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rate (Matthews see especially col 3, lines 5-10). It would have been obvious to one of ordinary skill in the art to modify Villa-Real in view of Myllymaki and in view of Lichter to add the calibration mode of Matthews in order to improve the accuracy of the determined heart rate.

Response to Arguments

9. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

10. As to applicant's comments regarding "holding pattern" note that the instant invention does not distinguish over simply selected valid sensors, which the applicant admits Myllymaki's circuitry does.

Conclusion

11. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip J. Sobutka whose telephone number is 703-305-4825. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Philip Sobutka

Pjs
May 31, 2002


WILLIAM TROST
SUPERVISORY PATENT EXAMINER
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